

The Living Fossil (Horseshoe crab)

Kamaruzzaman Yunus

Akbar John

Ahmed Jalal Khan Chowdhury

Zaleha Kassim



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Editors,

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CHAPTER -12

Influence of physicochemical parameters on the macrobenthic diversity and abundance in horseshoe crab nesting grounds, East coast of Peninsular Malaysia.

¹Akbar John, B., ¹Kamaruzzaman, B.Y., ²Zaleha, K.

¹*Institute of Oceanography and Maritime studies (INOCM), Kulliyah of Science,
International Islamic University Malaysia, Jalan Sultan Ahmad Shah,
Bandar Indera Mahkota, 25200, Kuantan Pahang, Malaysia*

²*Institute of Tropical Aquaculture, University Malaysia Terengganu, 21030 Kuala
Terengganu, Terengganu, Malaysia.*

Abstract

Study on the influence of various physicochemical parameters on the major macrobenthic communities along the nesting grounds of horseshoe crabs in East coast of Malaysia was conducted. Shannon diversity and Berger-Parker dominance were calculated for clustered macrobenthos including (Bivalves, gastropods and Polychaetes) which are of primary food source of horseshoe crabs. Pearson correlation analysis showed that the diversity is influenced by selective water quality parameters along the Pekan station during New moon days while the macrobenthic dominance were influenced by surface water temperature during full moon days in Pekan station. There was no significant influence of various physicochemical parameters on the diversity and dominance of major macrobenthic community observed in Balok station during both lunar cycles ($p > 0.05$). Present stud has clearly demonstrated that the selected water quality did not restrict the diversity and abundance of macrobenthos along the horseshoe crab nesting grounds (balok and Pekan stations). However, the observed lower diversity of macrobenthos in both the station ($H' < 1$) indicates severe habitat degradation in horseshoe crab nesting grounds along the East coast of peninsular Malaysia.

Key words: horseshoe crab, nesting grounds, habitat degradation, macrobenthic diversity, Malaysia